

## P A T E N T   C L A I M S

1. Method for the preparation of a paper reel (8) having a wound paper web for flying reel change by applying an adhesive tape (64) along an edge (83) of the web end,  
5 which has at least one outer tape having an outer adhesive surface for producing the joint between the web end and a paper web of a residual roll, and an inner tape which can be separated therefrom and has an inner adhesive surface for holding the web end on the  
10 next inner layer, by lifting of the outermost layer from the next inner layer, producing the edge (83) of the web end by cutting off an end section (82) from the outermost layer, applying the adhesive tape (64) and replacing the outermost layer on the next inner layer,  
15 a part of the outermost layer which is adjacent to the edge (83) of the web end being adhesively bonded to an adhesive strip of the outer adhesive surface while an edge strip adjacent thereto remains free and the inner adhesive surface adhesively bonds to the next inner  
20 layer, **characterized in that**, while the paper reel (8) remains otherwise unmoved, the lifting of the outermost layer is effected by placing a support surface, whose cross-section perpendicular to the axial direction of the paper reel (8) is substantially constant over its  
25 width, against the paper reel (8) and establishing a starting position in which a cutting line of the support surface, which cutting line is parallel to the axis of the paper reel (8), is in contact with a generating line of the paper reel (8), and the support  
30 surface is rolled, while the outermost layer is held resting on it, in the unwinding direction thereof on the paper reel (8), cutting off the end section (82) along the cutting line and applying the adhesive tape

(64) to the next inner layer in such a way that the boundary between the adhesive strip and the edge strip coincides with the generating line, whereupon the support surface is rolled back to the starting position for replacement of the outermost layer.

2. Method according to Claim 1, **characterized in that** the support surface is placed with the cutting line on the paper reel (8).
3. Method according to Claim 1 or 2, **characterized in that** the axis of the paper reel (8) is kept horizontal and the support surface is placed on the uppermost generating line.
4. Method according to any of Claims 1 to 3, **characterized in that**, before it is rolled in the unwinding direction, the support surface is first rolled a distance in the opposite direction on the paper reel (8) and the outermost layer is held on the support surface from the beginning of rolling in the unwinding direction.
5. Method according to any of Claims 1 to 4, **characterized in that** the holding of the outermost layer on the support surface is effected by reduced pressure.
6. Method according to any of Claims 1 to 5, **characterized in that**, after the end section (82) has been cut off, said end section is removed.
7. Apparatus for carrying out the method according to any of Claims 1 to 6, comprising a support surface having at least one cutting line and a cutting device (25).

movable along said cutting line over the support surface, **characterized in that** the support surface is formed by a section of a lateral surface (44) of a roll (22) while the cutting device (25) can be moved over  
5 the lateral surface (44) along a cutting line which follows a generating line of the lateral surface (44), and the roll (22) is mounted, so as to be rotatable about an axle (21) parallel to the axial direction of the paper reel (8), in a holder which is displaceable  
10 in a displacement direction transverse to said axial direction, so that the axle (21) is freely displaceable to a limited extent transverse to the axial direction and to the displacement direction.

8. Apparatus according to Claim 7, **characterized in that**  
15 the holder is formed by a carriage (11) displaceable in the displacement direction, and the axle (21) is mounted so as to be rotatable and nondisplaceable in a slide (17) which is mounted so as to be displaceable transversely to the axle (21) and transversely to the  
20 displacement direction of the carriage (11) in the latter.

9. Apparatus according to Claim 8, **characterized in that**  
the carriage (11) is mounted so as to be displaceable in a frame which is displaceable transversely to the  
25 axle (21) and to the displacement direction.

10. Apparatus according to Claim 8 or 9, **characterized in that** the cutting device (25) can be moved in the slide (17) parallel to the axle (21).

11. Apparatus according to Claim 10, **characterized in that**  
30 the cutting device (25) can be fed towards the roll

(22).

12. Apparatus according to Claim 10 or 11, **characterized in that** the cutting device (25) is arranged, so as to be displaceable towards the axle (21) and withdrawable therefrom but nondisplaceable transverse thereto, on a transverse slide (23) which can be moved parallel to the axle (21) in the slide (17) and which also carries an adhesive device (26).  
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13. Apparatus according to Claim 12, **characterized in that** the adhesive device (26) is arranged on the transverse slide (23) so as to be displaceable transversely to the axle (21) and to the displacement direction.  
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14. Apparatus according to any of Claims 7 to 13, **characterized in that** the axial direction of the paper reel (8) is horizontal and the holder is displaceable horizontally above said reel, in such a way that the end positions of the axle (21) are on different sides of the uppermost generating line of the paper reel (8).  
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15. Apparatus according to Claim 14, **characterized in that** the axle (21) is vertically displaceable in the holder.  
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16. Apparatus according to any of Claims 7 to 15, **characterized in that** the roll (22) has at least one cutting bar (45, 47) following a generating line, sunk into the support surface and preferably having a plastics surface, over which the cutting line runs.  
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17. Apparatus according to Claim 16, **characterized in that** it has at least two such cutting bars (45, 47).

18. Apparatus according to any of Claims 7 to 17,  
characterized in that the roll (22) has at least one  
suction zone substantially extending over the width of  
the support surface and provided with suction orifices.
- 5 19. Apparatus according to any of Claims 7 to 18,  
characterized in that the lateral surface (44)  
substantially corresponds to a lateral surface sector  
of a cylinder whose axis coincides with the axis (21)  
of the roll (22).
- 10 20. Apparatus according to any of Claims 7 to 19,  
characterized in that it has a take-off device (27) for  
removing the end section, which device comprises a  
plurality of revolving belts (29) which are distributed  
over the length of the roll (22) and can be pressed  
15 against the lateral surface (44).